DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-000290
Date Inspected: 12-Jul-2007

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 800
OSM Departure Time: 1730
Location: Shanghai, China

CWI Name:	Xu Bing			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☐ Yes	☑ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☐ Yes	☑ No	☐ N/A	**Approved WPS:**	☐ Yes	☐ No	☑ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: N/A

Summary of Items Observed:

The CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the welding qualification testing pertinent for the welding qualification records (PQRs) PQR HP2007150, PQR HP2007151, PQR HP2007226-1, PQR HP2007152, PQR HP2007250 and HP2007147-1 scheduled for this project. ZPMC, welder Zhu Hai Ping was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-3112 (fillet) or the PQR identified as HP2007150. Base metal was designated as A-709 Grade HPS485WT2/Z (Heat # 07101250N). ZPMC followed the Fillet weld WPS qualification criteria AWS 5.1 Subsection 5.10 using the shielded metal arc welding (SMAW) process in the horizontal (2F) position with the 4.0 mm diameter electrode designated as E7018-1, brand name THJ506Fe-1. The QA Inspector verified amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector witnessed single pass on one side and multiple passes (3) on the opposite side of the Tee joint. The QA inspectors performed random verifications of the welding parameters for a total of 4 passes. The QA inspectors found that the welding parameters taken by Quality Control (QC) inspector Xu Bing appeared to be accurate and in accordance with the contract documents.

The QA inspector performed a final visual inspection and observed that the weld reinforcement appeared to be in compliance with the contract documents. Caltrans lot # B71-039-07 was assigned to this PQR testing.

ZPMC, welder Zhu Hai Ping was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-3113 (fillet) or the PQR identified as HP2007226-1. Base metal was designated as A-709 Grade 50T-2 (Heat # 07200455020202). ZPMC followed the Fillet weld WPS qualification criteria AWS D1.5 subsection 5.10 using the shielded metal arc welding (SMAW) process in the horizontal (2F) position with the 5.0 mm diameter electrode designated as E7018-1, brand name THJ506Fe-1.

ZPMC assigned the same number for the second test coupon on PQR HP2007226-1. The QA Inspector verified dimensions, amperages, voltages, travel speeds, preheat and heat interpass temperatures for the PQR HP2007226-1 (second test coupon, the first test coupon from PQR HP2007226-1 failed due to the heat input exceeded the maximum required by the contract documents). The QA inspector witnessed single pass on one side and multiple passes (3) on the opposite side of the Tee joint. The QA inspectors performed random verifications of the welding parameters for a total of 4 passes. The QA inspectors found that the welding parameters taken by Quality Control (QC) inspector Xu Bing appeared to be accurate and in accordance with the contract documents.
The QA inspector performed a final visual inspection and observed that the weld reinforcement appeared to be in compliance with the contract documents. Caltrans lot # B71-038-07 was assigned to this PQR testing.
ZPMC, welder Zhu Hai Ping was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-3114 (fillet) or the PQR identified as HP2007250. Base metal was designated as A-709 Grade HPS485W (Heat # 06103565N). ZPMC followed the Fillet weld WPS qualification criteria AWS D1.5 Subsection 5.10 using the shielded metal arc welding (SMAW) process in the overhead (4F) position with the 4.0 mm diameter electrode designated as E7018-1, brand name THJ506Fe-1. The QA Inspector verified dimensions, amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector witnessed single pass on one side and multiple passes (3) on the opposite side of the Tee joint. The QA inspectors performed random verifications of the welding parameters for a total of 4 passes. The QA inspectors found that the welding parameters taken by Quality Control (QC) inspector Xu Bing appeared to be accurate and in accordance with the contract documents.
The QA inspector performed a final visual inspection and observed that the weld reinforcement appeared to be in compliance with the contract documents. Caltrans lot # B71-040-07 was assigned to this PQR testing.

ZPMC, welder Zhu Hai Ping was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-3113 (fillet) or the PQR identified as HP2007151. Base metal was designated as A-709 Grade HPS485W (Heat # 06103565N). ZPMC followed the Fillet weld WPS qualification criteria AWS D1.5 Subsection 5.10 using the shielded metal arc welding (SMAW) process in the vertical (3F) position with the 4.0 mm diameter electrode designated as E7018-1, brand name THJ506Fe-1. The QA Inspector verified dimensions, amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector witnessed single pass on one side and multiple passes (2) on the opposite side of the Tee joint. The QA inspectors performed random verifications of the welding parameters for a total of 3 passes. The QA inspectors found that the welding parameters taken by Quality Control (QC) inspector Xu Bing appeared to be accurate and in accordance with the contract documents.
The QA inspector performed a final visual inspection and observed that the weld reinforcement appeared to be in compliance with the contract documents. Caltrans lot # B71-041-07 was assigned to this PQR testing.

ZPMC, welder operator Zhang Xin Jin was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-3121 (fillet) or the PQR identified as PQR HP2007152. Base metal was designated as A-709 Grade HPS485W (Heat # 06103565N). ZPMC followed the Fillet weld WPS qualification criteria AWS D1.5 Subsection 5.10 using the submerged arc welding (SAW) process in the flat (1F) position with the 4.8 mm diameter electrode designated as ENi5 F9A4, brand name LA-85. The QA Inspector verified dimensions, amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector witnessed single pass on one side and multiple passes (2) on the opposite side of the Tee joint. The QA inspectors performed random verifications of the welding parameters for a total of 3 passes. The QA inspectors found that the welding parameters taken by Quality Control (QC) inspector Lu Jian Ping

appeared to be accurate and in accordance with the contract documents.
The QA inspector performed a final visual inspection and observed that the weld reinforcement appeared to be in compliance with the contract documents. Caltrans lot # B71-042-07 was assigned to this PQR testing

Note: After grinding the weld reinforcement, the QA inspector performed a final visual weld re-inspection and observed that the weld reinforcement for the PQR HP 2007247-1 appeared to be in compliance with the contract documents. Caltrans lot # B71-037-07 was assigned to PQR testing HP 2007247-1.

Summary of Conversations:

The QA inspector did not have any significant conversation on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Acuna,Alfredo	Quality Assurance Inspector
Reviewed By:	McClary,David	QA Reviewer